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Into a New Era: Volume 1 of the Archives of Environmental Health, July 1960

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Historical Vignette

Into a New Era: Volume 1 of the *Archives of Environmental Health*, July 1960

Derek R. Smith, PhD, DrMedSc, MPH

As a decade, the 1960s have been described as a period of soaring aspirations and deepening disenchantment; as well as an era when many Americans began to question, and some ultimately rejected, various time-honored values and societal norms.¹ As a year, 1960 also had its fair share of newsworthy items in the United States. Elvis Presley returned from military service, for example; the *Food and Drug Administration* (FDA) approved the world's first oral contraceptive, and the first Polaris missile was test-launched.² Significant events were also transpiring in the field of *Environmental and Occupational Health* (EOH), especially in April 1960 when a meeting of the Board of Trustees of the *American Medical Association* (AMA) decided that one of its journals, the *AMA Archives of Industrial Health* (AMA-AIH), should be updated to reflect a newly expanding role. This in turn, led to inauguration of the *Archives of Environmental Health* (AEH) in July 1960. Aside from the main change in its name, the new periodical also listed 3 subtitles (*Preventive Medicine*, *Occupational Medicine*, *Aerospace Medicine*) to help promote its new mission and more clearly identify interest areas and themes which were deemed important.³ Philip Drinker (1894–1972) continued his earlier role as Chief Editor, alongside an Editorial Board comprising Ronald F. Buchan, John H. Foulger, Rutherford T. Johnstone, Carl A. Nau, Sherman S. Pinto, Frank Princi, Oscar A. Sander, Helmuth H. Schrenk, Leo Wade, and Herbert E. Stokinger.⁴

The inaugural issue of the AEH contained a total of 8 articles; 5 of which described original research, 2 were case series, and 1 being a case report. See Table 1. The first article was written by Margaret C. Kordecki and Clyde Orr Jr. from the Georgia Institute of Technology in Atlanta and was

titled: “*Adhesion of solid particles to solid surfaces*.”⁵ Unfortunately, no biographical or historical information on either of these authors could be located during the preparation of this vignette. The second article to appear in Issue 1 of the AEH, a piece of original research titled: “*Reticuloendothelial response to benzene*,”⁶ was written by Zolton T. Wirtschafter and Margaret G. Bischel from the Research Laboratory of the Veterans Administration Hospital and the University of Oregon Medical School in Portland. Interestingly, in February of the same year, both authors had published an article in the AEH's predecessor journal, the AMA-AIH, which described the reticuloendothelial response to pentane.⁷ Detailed information on the history of the University of Oregon Medical School⁸ and the AMA-AIH can be found elsewhere.⁹ On the other hand, however, the authors appear to have essentially disappeared from historical record—Bischel sometime after 1964 and Wirtschafter after 1968.

The third article, this time a case series, was written by C. B. Chatgidakis from the Pneumoconiosis Research Unit of the Council for Scientific and Industrial Research at the *South African Institute for Medical Research* (SAIMR) in Johannesburg, entitled: “*The incidence of malignant disease in 1,620 African (Bantu) gold miners: an autopsy survey*.”¹⁰ The *British Journal of Industrial Medicine* published a similar study by the same author 3 years later,¹¹ although Chatgidakis appears to have disappeared from historical record sometime during this decade. Some brief biographical information is available, however. “Dr Chat” as she was known,¹² was a histopathologist at the SAIMR and indeed most specialist pathologists in the region had spent or would spend at least part of their training at this institute.¹³ Interestingly, the historical literature reveals that more biographical information

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Table 1.—Articles Published in the *Archives of Environmental Health*, Volume 1, Issue 1, July, 1960

Author	Title of article	Category	Pages
Margaret C. Kordecki and Clyde Orr Jr. ⁵	Adhesion of solid particles to solid surfaces.	Original Article	1–9
Zoltan T. Wirtschafter and Margaret G. Bischel ⁶	Reticuloendothelial response to benzene.	Original Article	10–16
C.B. Chatgidakis ¹⁰	The incidence of malignant disease in 1,620 African (Bantu) gold miners: an autopsy survey.	Case Series	17–19
William W. Payne ¹⁵	The role of roasted Chromite ore in the production of cancer.	Original Article	20–26
John Anderson & Francis A. Campagna ¹⁶	Asbestosis and carcinoma of the lung. Case report and review of the literature.	Case Report	27–32
William L. Sutton, et al. ¹⁷	Studies on the industrial hygiene and toxicology of triphenyl phosphate.	Original Article	33–46
Frances L. Estes and Joseph H. Gast ¹⁹	The in vitro effects of aliphatic nitro compounds on tissues.	Original Article	47–52
George E. Morris ²⁰	Dermatoses from phenylmercuric salts.	Case Series	53–55

has actually been reported on Chatgidakis's husband, Dr Basil Becker, who was a histopathologist and Head of the University Department of Pathology. Becker had also been actively involved in silicosis research since the mid 1940s.¹⁴

The fourth article from Issue 1 of the AEH was an original piece titled: “*The role of roasted chromite ore in the production of cancer*,”¹⁵ and was written by William W. Payne from the Environmental Cancer Section of the *National Institutes of Health* (NIH) in Bethesda, Maryland. The next article, “*Asbestosis and carcinoma of the lung; case report and review of the literature*,”¹⁶ was a case report and review of the literature written by John Anderson and Francis A. Campagna from St Mary's Hospital in San Francisco. Biographical information for any of the authors of these 2 articles appears to be scant, and could not be located during preparation of the current vignette. William L. Sutton and colleagues from the Laboratory of Industrial Medicine at the Eastman Kodak Company in Rochester, New York, contributed the sixth article listed in Issue 1, a piece titled: “*Studies on the industrial hygiene and toxicology of triphenyl phosphate*.”¹⁷ Their article had been previously presented at an annual meeting of the *American Industrial Hygiene Association* (AIHA) held in Chicago, 25 April to 1 May 1959. Interestingly, Sutton (along with other colleagues) would later write an obituary for James Hervi Sterner (1904–1992) (pioneering figure of industrial toxicology, industrial hygiene, and occupational medicine), in the journal *Toxicological Science*.¹⁸ Frances L. Estes and Joseph H. Gast from the Department of Biochemistry of the Baylor University College of Medicine in Houston, Texas, wrote an original article titled: “*The in vitro effects of aliphatic nitro compounds on tissues*”¹⁹ in Issue 1 of the AEH. The final article from this issue, a case series, was written by George E. Morris from Boston, a member of the Committee on Occupational Dermatoses within the Council on Industrial Health of the AMA. It was titled: “*Dermatoses from phenylmercuric salts*.”²⁰ Again, very little biographical information on these authors appears to have found its way into the literature and could not be located during the preparation of the current vignette.

Despite a dearth of biographical information regarding authors who contributed to the AEH's inaugural issue, history would, however, see various battles played out in the journal—some of which were ultimately recorded in depth. Perhaps one of the most interesting was a showdown on the environmental effects of man-made lead, fought predominantly between Clair C. Patterson and Robert A. Kehoe. Clair Cameron Patterson (1922–1995) was a pioneering researcher in geochemistry²¹ who was most famous for discovering a reliable method for determining the age of the Earth,²² although he also developed a significant interest in environmental lead contamination. Robert Arthur Kehoe (1893–1992) was an outspoken researcher on lead toxicity who exerted significant influence on US government policy, particularly in relation to lead being added to gasoline as an antiknock compound.²³ Not surprisingly, the battle between Patterson and Kehoe was all about lead, and one that would be played out between the late 1950s (when Patterson first became interested in lead contamination whilst conducting his aforementioned geological experiments) and the early 1980s (when lead was progressively phased out as a gasoline additive). The high water mark in their debate was probably Patterson's 1965 article published in the AEH,²⁴ a paper that some have since described as having “fundamentally altered the vocabulary of the debate over the health effects of lead.”²⁵ The AEH would eventually publish over 400 articles on lead-related topics between 1960 and 2004, including at least one issue devoted to a symposium on it.²⁶ Kehoe authored at least 10 of these and had, in fact, been publishing various lead-related papers in the AEH and its predecessor journals since the 1930s.^{27–31}

Another significant achievement of the AEH was its contribution to US environmental protection standards in air quality,³² as well as being a major outlet for crucial air pollution studies during the early years of the new *US Environmental Protection Agency* (US EPA).³³ One researcher whose groundbreaking work appeared in the AEH and who would significantly influence air pollution standards was Carl M. Shy from the University of North Carolina. His research from the *Community Health and Environmental*

Surveillance Studies (CHESS) as well as his pre-CHESS work published in the AEH during 1973³⁴ and followed up in 1982,³⁵ for example, provided important information regarding the effects of air pollution on school children. The CHESS studies themselves were not without controversy, however, as they had identified adverse health effects at air pollution levels previously considered to be “low.”³⁶ Nonetheless, despite some early criticisms, the main results of the CHESS studies were largely confirmed, updated, and extended by the Harvard Six City Studies and other research emanating from the Harvard School of Public Health.³⁷ Another series of studies published in the AEH,^{38–41} this time by Warren Winkelstein Jr. and colleagues, also offered significant insight into particulate levels and their potential health effects among adult men. Winkelstein’s air pollution research was particularly notable for helping to successfully separate the effects of air pollution from other confounding factors. According to Winkelstein, his study of air pollution in Buffalo (published in the AEH in 1967)⁴⁰ was probably the most influential paper of all.⁴² These contributions, along with others, helped raise the AEH to a leading journal for the publication of occupational hygiene and air pollution studies in the 20th century.⁴³ Although the AEH would publish many other “classics” during its 4 decades, no articles from the inaugural issue of 1960 would actually go on to become highly cited.⁴⁴ A search of the Thomson Reuters *Web of Science* (WoS) database in 2011 revealed that its most highly cited article was, in fact, written by Kasl and Cobb who looked at health behavior, illness behavior, and sick role behavior in 1966,⁴⁵ followed by Patterson’s aforementioned article on the contaminated and natural lead environments of man.²⁴

As well as publishing several pioneering articles in EOH, the journal’s Editorial Board also contained various pioneering individuals in the field. Inaugural Chief Editor Philip Drinker, who had been involved with the AEH and its predecessors for over 40 years,^{46–49} would remain in this position for only 1 year. In 1961, Katharine Boucot (Boucot Sturgis after 1962) (1903–1987), a pioneering figure in lung disease,⁵⁰ was appointed Editor-in-Chief and would eventually occupy this role between 1961 and 1971. Her tenure would later be described as a “golden era of scientific and scholarly prestige” for the AEH,⁵¹ with the journal expanding 3-fold.⁵² Aside from being the first female chief editor of a major American medical publication (the AEH), Boucot Sturgis had herself also achieved many personal accolades during her career.⁵⁰ In 1971, John S. Chapman (1908–2000) took over as Editor-in-Chief of the AEH, guiding the journal as it changed publishers from the AMA to the *Helen Dwight Reid Education Foundation* (HELDREF) in 1976.⁵³ In 1977, a trio of Executive Editors were appointed, comprising Wayland J. Hayes Jr., Herbert E. Stokinger, and Kaye H. Kilburn. Wayland J. Hayes Jr. (1917–1993) was a toxicologist who had served as president of the *Society of Toxicology* (SOT) between 1971 and 1972.⁵⁴ Biographical information on the second editor, Herbert E. Stokinger (1909–1998), has been described in detail

elsewhere.⁴ The third editor in the troika, Kaye H. Kilburn, was a Professor of Medicine at the University of Southern California, and would later become Editor-in-Chief of the AEH in 1986, remaining in this role until 2004.⁹

It is well-known that the examination of academic journals in a particular field provides an interesting and informative commentary of relevant events over time.⁵⁵ Examination of the AEH represents a clear example in this regard. Although the journal would ultimately publish over 5,000 articles on a variety of topics, an examination of its inaugural issue of 1960 and its highly cited articles clearly confirms the importance of air pollution research. This, in turn, led to what is probably the journals’ greatest achievement as a disseminator of critical research used in the development of US EPA policies and other air pollution standards in the United States, as elsewhere. High citation counts for air pollution articles clearly suggest that this topic constitutes an important part of the AEH’s publication legacy, whereas an examination of its Editorial Boards also provides a significant insight into the personalities who shaped this field over nearly half a century.

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